

What Is Claimed Is:

1. A cable distribution system, comprising:

a headend receptive of signals from a plurality of video sources, the headend including
5 a plurality of tuner/receiver/decoders that are each controllable to tune/receive/decode a
selected video channel and provide the video channel at a selected frequency, wherein certain
ones of the video channels contain analog video and audio signals and certain other ones of
the video channels contain a plurality of digital video and audio signals multiplexed together
to create a digital multiplex, selected ones of the plurality of video channels being
10 multiplexed together by the headend to create one or more multiplexed channel signals;

a plurality of service modules associated with the headend, each service module
receiving one or more of the multiplexed channel signals from the headend and providing it
to each of a plurality of frequency converters within each service module that each convert
one of the video channels to a predetermined frequency; and

15 a plurality of interface units associated with each service module, there being one
interface unit for each frequency converter of the service module, each interface unit being
located at a customer location, each interface unit receptive of one of the video channels
converted to the predetermined frequency, the interface unit passing a video and an audio
signal in the video channel to a video displaying apparatus;

20 wherein certain ones of the interface units can receive and decode both video channels
containing a digital multiplex and video channels containing analog video and audio signals;
and

wherein certain other ones of the interface units can receive and pass to the video
displaying apparatus video channels containing analog video and audio signals, but cannot

wherein certain other ones of the interface units can receive and pass to the video displaying apparatus video channels containing analog video and audio signals, but cannot decode and pass to the video displaying apparatus video channels containing a digital multiplex.

5

2. A cable distribution system as defined in claim 1, further including cabling running between each service module and the plurality of interface units associated therewith, the cabling being bandwidth limited so as to not efficiently carry signals appreciably above 350 MHz.

10

3. A cable distribution system as defined in claim 2, wherein the cabling is metallic coaxial cabling.

4. A cable distribution system as defined in claim 1, further including cabling running between the headend and each of the plurality of service modules associated therewith, the cabling having sufficient bandwidth capacity to be able to efficiently carry signals at least as high as 750 MHz.

15

5. A cable distribution system as defined in claim 1, wherein the headend also includes a block of Personal Video Recorders.

20

6. A cable distribution system as defined in claim 1, wherein the headend also includes a Video On Demand Server.

7. A cable distribution system as defined in claim 1, wherein the headend also includes a Personal Computer.

8. A cable distribution system as defined in claim 1, wherein the headend also
5 includes a DOCSIS frequency converter.

9. A cable distribution system as defined in claim 8, wherein a DOCSIS forward channel being carried from an Internet service provider to a customer is converted by the DOCSIS frequency converter to a different frequency for passage to the plurality of service
10 modules and associated interface units.

10. A cable distribution system as defined in claim 1, wherein each of the frequency converters in each of the plurality of service modules is a programmable converter.

11. A cable distribution system as defined in claim 1, further including a different
15 bandpass filter associated with each frequency converter.

12. A cable distribution system as defined in claim 1, wherein each interface unit does not include a microprocessor.

20

13. A cable distribution system as defined in claim 1, wherein each service module utilizes the same predetermined frequencies as each other service module.

14. A cable distribution system as defined in claim 1, wherein each tuner/receiver/decoder tunes, receives, and decodes a given video channel and that channel from that tuner/receiver/decoder can be displayed on every video displaying apparatus associated with that headend.

5

15. A cable distribution system as defined in claim 1, wherein the interface unit passes information back upstream to its associated service module that includes channel selection information.

10

16. A cable distribution system as defined in claim 15, wherein the information passed back upstream to the service module also includes a DOCSIS return channel that is passed by the service module back to the headend and back to an Internet service provider.

15

17. A cable distribution system as defined in claim 1, further including a processor and associated database in communication with the headend and the service module, the processor being functional to control the operation of the receiver/decoders and the database assisting the microprocessor in this functionality and in storing customer viewing preferences.

20

18. A cable distribution system as defined in claim 1, wherein the local service module will only convert a selected video channel to the predetermined output frequency associated with a particular interface unit if that interface unit is authorized to receive that selected video channel.

19. A cable distribution system as defined in claim 1, wherein the headend
includes a cable mode transmission system (CMTS).

20. A cable distribution system as defined in claim 1, further including cabling
5 running between each service module and the plurality of interface units associated therewith,
the cabling having a home run architecture.

21. A cable distribution system as defined in claim 1, further including cabling
running between each service module and the plurality of interface units associated therewith,
10 the cabling having a loop through architecture.

22. A cable distribution system as defined in claim 1, further including cabling
running between each service module and the plurality of interface units associated therewith,
the cabling having a tree and branch architecture.

15

23. A cable distribution system as defined in claim 1, wherein one or more of the
video channels includes MPEG-4 encoded information.

24. A cable distribution system as defined in claim 1, wherein the headend is a
20 local headend.

25. A cable distribution system as defined in claim 24, further including a regional headend located at a location remote from the local headend, the regional headend providing video channels at selected frequencies to the local headend.

26. A cable distribution system, comprising:

a headend receptive of signals from a plurality of video sources, the headend including a plurality of tuner/receiver/decoders that are each controllable to tune/receive/decode a selected video channel and provide the video channel at a selected frequency, wherein certain

5 ones of the video channels contain analog video and audio signals and certain other ones of the video channels contain a plurality of digital video and audio signals multiplexed together to create a digital multiplex, selected ones of the plurality of video channels being multiplexed together by the headend to create one or more multiplexed channel signals;

a plurality of service modules associated with the headend, each service module

10 receiving one or more of the multiplexed channel signals from the headend and providing it to each of a plurality of frequency converters within each service module that each convert one of the video channels to a predetermined frequency; and

a plurality of interface units associated with each service module, there being one interface unit for each frequency converter of the service module, each interface unit being

15 located at a customer location, each interface unit receptive of one of the video channels converted to the predetermined frequency, the interface unit passing a video and an audio signal in the video channel to a video displaying apparatus.

27. A cable distribution system as defined in claim 26, wherein there are at least

20 two different configurations of interface units, one type provided to customers that are authorized to receive digital audio and video signals and one type provided to customers that are not authorized to receive digital audio and video signals.

28. A cable distribution system as defined in claim 26, wherein the video channels have been spectrally inverted prior to passage to the interface unit.

29. A cable distribution system as defined in claim 28, wherein the interface unit
5 spectrally inverts the received video channel to restore the original audio and video signal orientation before sending it to the set-top box.

30. A cable distribution system as defined in claim 29, wherein the at least one interface unit includes a high side LO frequency converter.

10

31. A cable distribution system as defined in claim 28, wherein the spectral inversion is performed at the headend.

32. A cable distribution system as defined in claim 28, wherein the spectral
15 inversion is performed at the service module.

33. A cable distribution system, comprising:

a headend receptive of signals from a plurality of video sources, the headend including a plurality of tuner/receiver/decoders that are each controllable to tune/receive/decode a selected video channel and provide the video channel at a selected frequency, wherein certain
5 ones of the video channels contain analog video and audio signals and certain other ones of the video channels contain a plurality of digital video and audio signals multiplexed together to create a digital multiplex, selected ones of the plurality of video channels being multiplexed together by the headend to create one or more multiplexed channel signals;

a plurality of service modules associated with the headend, each service module
10 receiving one or more of the multiplexed channel signals from the headend and providing it to each of a plurality of frequency converters within each service module that each convert one of the video channels to a predetermined frequency;

a plurality of interface units associated with each service module, there being one interface unit for each frequency converter of the service module, each interface unit being
15 located at a customer location, each interface unit having a frequency converter that converts the frequency of the video channel received from the service module; and

a set-top box associated with at least one of the interface units, the set-top box being receptive of the video channel from the interface unit, the set-top box passing a video and an audio signal in the video channel to a video displaying apparatus.